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[Claim(s)]

[Claim 1] The terminal installed in various medical institutions at least and the host installed by the data control organization are the medical support systems connected through the network. The medical support system which transmits a patient's medical data created at least in the various above-mentioned medical institutions through the above-mentioned network, is made to carry out central control in the above-mentioned data control organization, and is characterized by offering the above-mentioned medical data according to the demand from the various above-mentioned medical institutions.

[Claim 2] The medical support system according to claim 1 characterized by also connecting to the above-mentioned network the terminal installed in general ** etc., and offering the above-mentioned medical data also by the demand from a general user.

[Claim 3] The medical support system according to claim 1 or 2 which is characterized by carrying out central control of the job data of the various above-mentioned medical institutions in the above-mentioned data control organization in addition to the above-mentioned patient's medical data.

[Claim 4] An authentication means by which the host of the above-mentioned data control organization attests a user based on the data for authentication sent from the various above-mentioned medical institutions, general **, etc., Claim 1 characterized by having the data use control means controlled to offer only the data which defined use beforehand to the attested user based on the authentication result by the above-mentioned authentication means - a medical support system given in any 1 clause of three.

[Claim 5] [the above-mentioned authentication means / use / by which central control is carried out in the above-mentioned data control organization / of data] Attest a user and a user group with the utilization right defined beforehand, and [the above-mentioned data use control means] The medical support system according to claim 4 characterized by controlling

to offer only the data which defined use beforehand to the user and user group which were attested by the above-mentioned authentication means.

[Claim 6] Claim 1 characterized by establishing the invasion prevention means for preventing the unauthorized entry by a third party into the interface portion of the above-mentioned data control organization and the above-mentioned network at least - a medical support system given in any 1 clause of five.

[Claim 7] Claim 1 characterized by establishing an encryption means to encipher and to make it transmit when transmitting the data by which central control is carried out in the above-mentioned data control organization through a network - a medical support system given in any 1 clause of six.

[Claim 8] The host of the above-mentioned data control organization is a medical support system given in Claim 1 characterized by enciphering the data which should be carried out central control and making it store in concentration data storage equipment - any 1 clause of seven.

[Claim 9] It has an attribute grant means to give predetermined attribution information to the data by which central control is carried out in the above-mentioned data control organization. Claim 1 characterized by managing storage and offer of data using the attribution information given by the above-mentioned attribute grant means - a medical support system given in any 1 clause of eight.

[Claim 10] The data by which central control is carried out in the above-mentioned data control organization has two or more layer structures. The medical support system according to claim 9 characterized by a part of attribute associating the same layer, and making it provide while forbidding record for the second time to the layer which records the attribution information which contains with a refix date for every renewal of data on a layer which gives and is different, and has the same attribute.

[Claim 11] Claim 1 characterized by forming the data storage equipment which stores some data by which central control is carried out in the above-mentioned data control organization in the various above-mentioned medical institutions - a medical support system given in any 1 clause of eight.

[Claim 12] The medical support system according to claim 11 characterized by establishing the invasion prevention means for preventing the unauthorized entry by a third party into the interface portion of the various above-mentioned medical institutions and the above-mentioned network.

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the medical support system for aiming at improvement in a medical service etc.

[0002]

[Description of the Prior Art] While the demand to control of medical expenses or improvement in a medical service increases in recent years, the motion which takes in advanced information processing technique in the medical field is expanded. For example, a patient is received with a computer terminal, if those order is inputted into a terminal as a result of a medical examination when it is judged that medication and inspection are required, the information will be given to the pharmacy section and a clinical laboratory department, and preparation of medicine or inspection will be advanced. Moreover, the system of calculating a medical treatment fee automatically is mentioned as an example by inputting the contents of such a medical examination into a terminal.

[0003]

[Problem to be solved by the invention] However, the conventional medical system was the network in an institution restricted in the 1 hospital, and the most was only what only systematized medical office work like an above-mentioned example. That is, there was almost nothing that was systematized that the medical practice itself, such as a doctor and inspection machine Seki, should be supported.

[0004] In addition, although the home health examination system performed by putting a terminal for exclusive use on patient's home, and carrying out network connection to the host computer of a hospital, the telediagnosis system performed by connecting between large hospitals with an ISDN circuit, and transmitting a shape of microscopic features etc., etc. are being used It did not have the mechanism of having passed over neither to the KUROZUDO network to which between specific institutions was connected by the common carrier leased line, and using for subsequent Medical Science Division by using the diagnostic result as a system.

[0005] Therefore, depending on such a conventional medical system, improvement in medical level was not necessarily achieved, and improvement in a medical service was not necessarily achieved innovatively. Moreover, compared with a large hospital, it was common for a medical level to be low, therefore there was also a problem of a patient concentrating on a large hospital at the small hospital and small clinic of an area.

[0006] The local resident who accomplishes this invention in view of such the actual condition, and contains the hospital, hospital and clinics which carried out mutually-independent, and those patients can use the data about Medical Science Division mutually. it aims at offering the system which can boil the whole medical service markedly and can raise those also including a private hospital or a small-scale hospital.

[0007] Since a special field called Medical Science Division has various restrictions peculiar to it in that case, it is necessary to offer the system which filled it but, and it is difficult to build such a system at each hospital, clinic, etc. in respect of plant-and-equipment investment expense etc. Therefore, this invention aims also at enabling it to offer the system which aims at improvement in the above medical services, without enlarging the burden in each hospital, clinic, etc.

[0008]

[Means for solving problem] The terminal with which the medical support system of this invention is installed in various medical institutions at least, The host installed by the data control organization is the medical support system connected through the network. A patient's medical data created at least in the various above-mentioned medical institutions is transmitted through the above-mentioned network, and it is made to carry out central control in the above-mentioned data control organization, and is characterized by offering the above-mentioned medical data according to the demand from the various above-mentioned medical institutions.

[0009] The place by which it is characterized [of this invention / other] also connects to the above-mentioned network the terminal installed in general ** etc., and is characterized by offering the above-mentioned medical data also by the demand from a general user.

[0010] In addition to the above-mentioned patient's medical data, the place by which it is characterized [of others of this invention] is characterized by carrying out central control of the job data of the various above-mentioned medical institutions in the above-mentioned data control organization.

[0011] The place by which it is characterized [of others of this invention] [the host of the above-mentioned data control organization] The authentication means which attests a user based on the data for authentication sent from the various above-mentioned medical institutions, general **, etc., It is characterized by having the data use control means controlled to offer only the data which defined use beforehand to the attested user based on the authentication result by the above-mentioned authentication means.

[0012] [here / the above-mentioned authentication means / use / by which central control is carried out in the above-mentioned data control organization / of data], for example A user and a user group with the utilization right defined beforehand are attested, and the above-mentioned data use control means is controlled to offer only the data which defined use beforehand to the user and user group which were attested by the above-mentioned authentication means.

[0013] The place by which it is characterized [of others of this invention] is characterized by establishing the invasion prevention means for preventing the unauthorized entry by a third party into the interface portion of the above-mentioned data control organization and the above-mentioned network at least.

[0014] The place by which it is characterized [of others of this invention] is characterized by establishing an encryption means to encipher and to make it transmit, when transmitting the data by which central control is carried out in the above-mentioned data control organization through a network.

[0015] The place by which it is characterized [of others of this invention], the host of the above-mentioned data control organization is characterized by enciphering the data which should be carried out central control and making it store in concentration data storage equipment.

[0016] The place by which it is characterized [of others of this invention] is equipped with an attribute grant means to give predetermined attribution information to the data by which central control is carried out in the above-mentioned data control organization, and is characterized by managing storage and offer of data using the attribution information given by the above-mentioned attribute grant means.

[0017] For example, the data by which central control is carried out in the above-mentioned data control organization has two or more layer structures. The attribution information which contains with a refix date for every renewal of data is recorded on a layer which gives and is different, and while forbidding record for the second time to a layer with the same attribute, a part of attribute associates the same layer, and you may make it provide.

[0018] The place by which it is characterized [of others of this invention] is characterized by forming the data storage equipment which stores some data by which central control is carried out in the above-mentioned data control organization in the various above-mentioned medical institutions. In this case, you may establish the invasion prevention means for preventing the unauthorized entry by a third party into the interface portion of the various above-mentioned medical institutions and the above-mentioned network.

[0019]

[Mode for carrying out the invention] One embodiment of this invention is hereafter explained based on Drawings. Drawing 1 is the block diagram showing the example of 1 composition of the medical support system by this embodiment, and drawing 2 is the figure showing the image using the medical support system of this embodiment concerned of medical service offer.

[0020] a patient's medical data (medical records --) created in this embodiment in various medical institutions, such as a small-scale hospital and small-scale clinic 21, a large-scale admitting hospital and the large-scale special hospital 22, and special inspection machine Seki 23, as shown in drawing 2 Job data (ON leaving the garage of medical supplies and an article of consumption, data of use and the use plan of inspection equipment, etc.), such as inspection information, etc. and a hospital, a hospital, is transmitted to the single medical support service establishment 25 through an open network 24, and central control is carried

out as a database.

[0021] And in the medical support service establishment 25, demands, such as the various medical institutions 21-23 and general population who mentioned above, and a patient 26 or a self-governing body, are accepted from 27. By transmitting some or all of data that was put in a database to a requiring agency through an open network 24, various services which are mentioned later, such as resident support service, hospital support service, and medical evaluation service, are provided.

[0022] thus, [this embodiment] not only in the data about medical office work He manages intensively the data (especially patient data, such as medication record, medical records, and inspection information) about the medical practice itself offered from various medical institutions in one organization using an open network, and is trying to offer it according to a demand. Therefore, the local resident including those patients, such as a hospital, a hospital, a clinic, inspection machine Seki, etc. which carried out mutually-independent, can use now the data about Medical Science Division mutually easily.

[0023] The data exchange in the group practice which treats by two or more hospitals (doctor) etc. cooperating to an individual by this, for example can be made easy, or the best medical treatment method can be discovered at an early stage by analyzing the medical data created in various hospitals, inspection machine Seki, etc. Moreover, objective evaluation of whether the medical treatment method for the specific illness in a specific hospital or the resource used for the medical treatment was suitable can also be performed, and it can ** to improvement in medical level. Furthermore, at a small-scale clinic, the latest medical information difficult to get can also be acquired easily at the clinic concerned etc., and the bottom raising of a community medicine level can be aimed at.

[0024] However, the medical support system of this embodiment needs to satisfy various requirements which are described below from the peculiarity of the medical field. That is, a secret protection patient's medical records or inspection information on a ** patient's privacy and business are not applied to privacy, and anyone refers to them freely. moreover, a patient -- since there is also information which only the doctor knows and he should know and which does not come out even when he refers to it, the secret on such business should be kept.

[0025] ** It is necessary to prevent effectively the program by the invasion from the secured outside of the security of a system and data and the alteration of data, tapping of the data under transmission, and an alteration.

** Since it is not desirable, that the medical practice which used the medical support system concerned according to a power failure, a trouble, etc. of the secured system of the reliability of a system stops needs the function in which it can respond also at the time of those abrupt increases.

[0026] ** Since it may become a mortal wound in emergency, especially causing delay to

medical practice by the response delay at the time of rush hours of the secured network of system response nature and the time lag by a lot of data transmission needs to prevent effectively. As medical practice can be efficiently performed in order to fill above various demands, with the medical support system of this embodiment, it has composition as shown in drawing 1 in order to aim at improvement in service. Drawing 1 is explained hereafter.

[0027] As shown in drawing 1 , various kinds of medical facilities, such as a hospital, a hospital, and a clinic (It is hereafter described as a hospital, a clinic, etc.) general ** (it is hereafter described as a patient etc.) 26, such as 21, 22, special inspection machine Seki 23, and a patient, a general user, -- respectively -- being alike -- it has the terminals 10, 15, and 18 used by this system, respectively. These terminals are used for sending medical data and job data which were created with various directions, a demand, or each institution to the medical support service establishment 25, or referring to the data sent from the medical support service establishment 25 concerned according to it.

[0028] The input units 11 and 19 for authentication are connected to the terminals 10 of 21 and 22, such as a hospital and a clinic, and the terminals 18 of 26, such as a patient, respectively. Users, such as a patient, a doctor, a nurse, and other medical staffs, have a respectively original IC card for authentication, and authentication is performed by the card information. You may be made to attest by entering a password in addition to an IC card.

[0029] Although the authentication equipment 2 of the medical support service establishment 25 performs a user's authentication in the example of drawing 1 based on the above-mentioned card information sent through the wide area network 24 from 26, such as 21, 22, patients, etc., such as a hospital and a clinic, a third party certificate (CA) can also be used. In addition, in the case of a patient, the above-mentioned IC card can add and constitute predetermined additional information to the information on the patient's registration card published in a hospital etc., for example.

[0030] And it is based on the authentication result of a user and a user group which has the utilization right defined beforehand in this embodiment. Use (access to medical data and job data by which central control is carried out with the concentration data storage equipment 7 of the medical support service establishment 25, and use of the various applications in application equipment 4) of a system is recognized. Here, there are three kinds of users attested, the holder of data, the user of the data which others hold, and the user of anonymity data, at least, and access to the data of a database is controlled per the holder unit of data, and item.

[0031] That is, the storage data use control unit 5 is controlled to supply only the data defined beforehand to the user and user group which were attested with authentication equipment 2 about use of the medical data and job data which were stored in concentration data storage equipment 7. That is, according to distinction of users, such as a patient, a doctor in charge, a

member of group practice, and a nurse, accessible data and an accessible item are controlled out of the medical data and job data which change by various items. Such control is performed based on the table information with which the storage data use control unit 5 was equipped, for example.

[0032] For example, when attested as a certain patient or its doctor in charge, it controls to be able to access only the data about the patient. Moreover, when performing group practice, it controls to provide to the doctor attested as a member of group practice, even if it is data which other doctors hold. In addition, if an agreement is reached between a patient, its doctor in charge, and the doctor that does group practice to it, it can register as group practice ** at any time. Moreover, although the name of a patient or a doctor in charge cannot be accessed to take common statistical data using medical data etc., it controls to be able to access the other required medical data.

[0033] Moreover, as mentioned above, medical data and job data from 21, 22, and inspection machine Seki 23, such as a hospital and a clinic, by which central control is carried out with concentration data storage equipment 7 are applied to privacy, and since they are very important data, they need to prevent being stolen by others or being altered. Therefore, in this embodiment, in order to prevent an illegal use person from invading simply to the medical support service establishment 25 connected to the open wide area network 24, invasion prevention equipment 1 is formed in the network inlet part. As invasion prevention equipment 1, it is possible to use means, such as a firewall of the Internet, a proxy, and an application gateway, for example.

[0034] Moreover, it is necessary for it to to be necessary not only to prevent that the data in concentration data storage equipment 7 is unjustly used by the invasion from the outside, but to prevent effectively tapping and an alteration of the data under transmission using the wide area network 24. Therefore, in this embodiment, it has data encryption equipment 3, 12, 16, and 20 which performs a data encryption and a decoding to each of 26, such as 21, 22 and inspection machine Seki 23, such as the medical support service establishment 25, and a hospital, a clinic, and a patient. And he is trying to prevent tapping and the alteration on a transmission line by enciphering and transmitting medical data and job data.

[0035] That is, 21, 22, and inspection machine Seki 23 which are the source of medical data or job data, such as a hospital and a clinic, encipher the generated data concerned, transmit it to the wide area network 24, and are supplied to the medical support service establishment 25. In addition, a symmetrical key performs encryption and the object key is transmitted by encryption by an asymmetrical key. In the medical support service establishment 25, in order to be able to use the received medical data with application equipment 4, in data encryption equipment 3, it decrypts to the original data.

[0036] Application equipment 4 is equipped with various applications, such as an electronic

chart system, a group practice system, inquiry system of medical information, or a medical treatment fee computing system. For example, in the application of an electronic chart system, attribution information (the identification code of inspection machine Seki, a receipt number, time, a page number, etc.) is given about the inspection information in inspection machine Seki 23 at the time of the reception from inspection machine Seki 23. In addition, about the medical data of the chart with which medication record and medical records were written, attribution information (a patient's identification code, the identification code of a doctor and a hospital, time, a page number, etc.) is given at the time of inputs of 21 and 22, such as a hospital and a clinic. This attribution information is used when controlling offer of medical data etc., for example by the storage data use control unit 5.

[0037] And the medical data and job data with which it did in this way and the attribute was given are stored in concentration data storage equipment 7. At this time, medical data etc. is enciphered and stored by this embodiment using data data encryption equipment 8. Since the data stored is enciphered even when it should be accessed illegally by the medical support service establishment 25, in spite of having formed invasion prevention equipment 1 by this, there is Merritt that it can avoid referring to it simply.

[0038] Contrary to the above, also when transmitting medical data etc. from the medical support service establishment 25, it enciphers. That is, according to demands from 21 and 22, such as 26, a hospital, clinics, etc., such as a patient who is a user, data data encryption equipment 8 decrypts and extracts the data stored in concentration data storage equipment 7, it is enciphered with data encryption equipment 3, and it transmits on the wide area network 24. Or the extracted data is supplied to application equipment 4 if needed, the processing result is enciphered with data encryption equipment 3, and it transmits on the wide area network 24.

[0039] In this embodiment, even when attested with his being a user with a still more nearly just utilization right, in order to prevent that the data of the medical records of the already created past etc. is changed unjustly, the means for it is established on application. That is, when creation of data, correction, addition, deletion, etc. are performed, the record is automatic-generated and it leaves it. For example, when performing correction and deletion, it is made to carry out, without eliminating front data (point which draws the double line and adds new data on front data).

[0040] As concrete technique for realizing this, two or more layers are given to one medical data, and the technique prevented from writing in data only once is mentioned to each layer, for example. that is, when making correction of data etc., correction etc. is made on a layer other than the layer in which data is already written, and whenever data is written in, the attribute at that time is given for every layer (thereby, even when a name of patient etc. is the same, attributes, such as time, differ for every layer). And it enables it to make correction etc.

by making it not receive writing to the layer of the same attribute at all, leaving the past data completely.

[0041] Thus, when it constitutes, storage of the medical data to concentration data storage equipment 7 etc. classifies the addition of the contents of record, correction, etc. with an attribute, and performs them. And when reading the stored medical data, a part of attribute associates the same record, and it enables it to provide. For example, about what has a the same name of patient and a the same doctor-in-charge name, as a chart when consulting the doctor of specification [a specific patient], it is read in order of the date and offered. Furthermore, in this embodiment, in order to be unable to change the date itself unjustly, the time receiving set 6 receives standard time, and the time on the system is unified.

[0042] next, [this embodiment] as a preliminary means by which the medical support system concerned can be used also at the time of fault occurrences, such as a power failure in the medical support service establishment 25, and a network trouble It has user side data storage equipment 13 to the terminals 10 of 21 and 22, such as a hospital and a clinic, and he stores some of medical data stored in concentration data storage equipment 7, and job data also in the user side data storage equipment 13 concerned, and is trying to appropriate for the use of medical practice.

[0043] The data stored in user side data storage equipment 13 is the latest medical data, for example. In this case, it is made to send to concentration data storage equipment 7 after use by that (for one layer from which an attribute differs to increase more than concentration data storage equipment 7 with user side data storage equipment 13) out of which a difference comes to the contents of storage with user side data storage equipment 13 and concentration data storage equipment 7. If it does in this way, even if the medical support service establishment 25 stops moving by abrupt increase, medical practice is continuable using the data currently stored in user side data storage equipment 13.

[0044] Moreover, in this embodiment, a database is doubled, the log of updating is saved and it can be made to perform restoration perfect at the time of failure so that it can respond, also when the data stored in concentration data storage equipment 7 disappears according to a certain obstacle or is hit by the trouble.

[0045] The above-mentioned user side data storage equipment 13 is used also as a means for coping with the response delay in a network etc. For example, since the medical picture data of an X-ray picture, ultrasonic data, etc. has the huge amount of data and transmission takes time By postponing and storing the medical picture required for the pieces of 21 and 22 of user side data storage equipment 13, such as a hospital and a clinic, etc. from the medical support service establishment 25, from there, a medical picture etc. can be taken out quickly and can be used now.

[0046] Thus, since the important data of a hospital, a clinic, etc. applied to a secret matter also

in 21 and 22 is stored, in order to defend to the invasion from the outside, invasion prevention equipment 14 is formed. In addition, although there is also no input unit for invasion prevention equipment and authentication in inspection machine Seki 23, it assumes that data with this important for inspection machine Seki 23 is not stored, and there is no data utilization request from inspection machine Seki 23 to the medical support service establishment 25 fundamentally.

[0047] In addition, as mentioned above, since the amount of data is huge, when an X-ray picture and ultrasonic data transmit these data from inspection machine Seki 23, they can also be transmitted through the common carrier leased line using the data transmission units 9 and 17 through the wide area network 24. By using the common carrier leased line, tapping and an alteration of the data under transmission are prevented to some extent.

[0048] It manages intensively in one medical support service establishment 25 by transmitting medical data and job data which were created in 21, 22, and inspection machine Seki 23, such as a hospital and a clinic, through the wide area network 24 according to this embodiment, as explained in detail above. He is trying to offer it according to the demand from a user.

[0049] Therefore, the data about Medical Science Division can be mutually used easily among local residents including those patients, such as a hospital, a hospital, a clinic, inspection machine Seki, etc. which carried out mutually-independent. [provide the medical support service which used the open network by this to various medical institutions including a private hospital and a small-scale hospital, for example, or] collection of community medicine data and informational service to a medical improvement can be performed, and medical level and a medical service can be boiled markedly and can be raised now.

[0050] For example, that it is easy to perform joint diagnostic treatment between hospitals or between a hospital and a hospital, it can carry out or objective evaluation of diagnostic treatment can be performed now. In the medical support service establishment 25, moreover, a patient's recording (electronic Karte), The service which executes hospital business, such as order of stock control, such as medicine and an article of consumption, order control, medical treatment fee calculation, inspection, medication, hospitalization, etc., etc. and management of progress management, inspection information, diagnostic image data, etc., etc., by proxy can be provided, and it can concentrate now on a diagnosis, medical treatment, etc. in a hospital or a hospital.

[0051] Furthermore, a general user can be provided with medical information and medical institution information, such as medication record, or consulting about Medical Science Division and a medical institution can be performed. Moreover, it not only can perform necessary prediction of quick analysis of the sick trend of an area, opposite ****, etc., but it can analyze the medical property of an area now easily.

[0052] Moreover, according to this embodiment, it can be managed with 26, such as 21, 22,

patients, etc., such as each hospital, clinic, etc., even if it does not build the system which fulfills severe conditions peculiar to the medical field. Namely, since what is necessary is just to use software distributed from the medical support service establishment 25 in 26, such as 21, 22, patients, etc., such as a hospital and a clinic, that the medical support service establishment 25 should just perform construction of such a system It also has Merritt that investment which is in charge of using this system can be suppressed few.

[0053] In addition, since it has Merritt [, like in 21 and 22, the data exchange in group practice and analysis of inspection information become easy], such as a hospital and a clinic, at least by carrying out central control of medical data or the job data with concentration data storage equipment 7 A patient etc. does not necessarily need to include 26 in a system. However, if [a patient etc. / 26] accessible, since a medical service can be raised more, he is desirable.

[0054]

[Effect of the Invention] As mentioned above, this invention transmits a patient's medical data created at least in various medical institutions through a network, and is made to carry out central control in a data control organization. Since medical data was offered according to the demand from various medical institutions, the medical service which used the network to the various medical institutions which did mutually-independent can be provided. group practice, analysis of medical data, etc. perform the data about Medical Science Division by using mutually by this, for example -- being easy -- medical level and a medical service can be boiled markedly and can be raised. And since it can be managed with each medical institution even if it does not build the system which fulfills severe conditions peculiar to the medical field, investment which is in charge of using this system can be suppressed few.

[0055] Moreover, since according to other features of this invention the terminal installed in general ** etc. is also connected to a network and medical data was offered also by the demand from a general user The medical service which used the network also to the local resident including not only various medical institutions but those patients can be provided, and a medical service can be raised further.

[Brief Description of the Drawings]

[Drawing 1] It is the block diagram showing the example of 1 composition of the medical support system which is one embodiment of this invention.

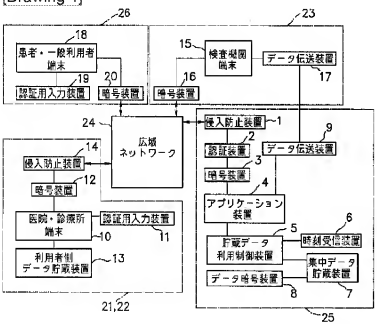
[Drawing 2] It is the figure showing the image using the medical support system of this embodiment of medical service offer.

[Explanations of letters or numerals]

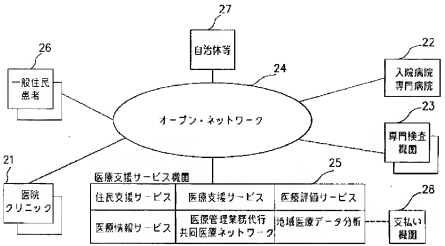
1, 14 Invasion prevention equipment

2 Authentication Equipment
3, 12, 16, 20 Data encryption equipment
4 Application Equipment
5 Storage Data Use Control Unit
6 Time Receiving Set
7 Concentration Data Storage Equipment
8 Data Data Encryption Equipment
9, 17 Data transmission unit
10, 15, 18 Terminal
11, 19 Input unit for authentication
13 User Side Data Storage Equipment
24 Wide Area Network (Open Network)

[Drawing 1]



[Drawing 2]



[Translation done.]